

CLAIMS

1. A method for detecting a differential pressure or for correcting a pressure value detected in a fluid on the basis of another pressure, wherein at one point in time one detects a first pressure and another point in time a second pressure, and the second pressure is corrected on the basis of the first pressure.
2. A method according to claim 1, with which there is provided at least one pressure sensor serving as a level sensor in a pump, and at the one point in time the pressure of the surroundings is detected and at the other point in time the pressure of the fluid to be delivered by the pump is detected.
3. A method according to claim 2, with which the pressure sensor for detecting the pressure of the surroundings at the one point in time is brought into a position above the surface of the fluid to be delivered.
4. A method according to claim 2 or 3, with which the pressure sensor for detecting the pressure of the fluid to be delivered at the other point in time is brought into a position below the surface of the fluid to be delivered.
5. A method according to claim 3 or 4, with which for determining the pressure of the surroundings the fluid level is lowered below the level (S_2) of the pressure sensor and the pressure sensor detects the pressure of the surroundings for correcting the pressure value detected in the fluid.
6. A method according to claim 5, with which after reaching the level (S_2) of the pressure sensor the fluid level is lowered to a predefined value (S_1) below the level (S_2) of the pressure sensor.
7. A method according to claim 6, with which the fluid level after reaching the level (S_2) of the pressure sensor is further lowered for a predefined period of time (t_1).

8. A method according to claim 7, with which the period of time is computed on the basis of the sinking speed (dh/dt) of the fluid level previously detected by the level sensor.
9. A method according to one of the claims 6 to 8, with which the pump is switched off after reaching the level (S_2) of the pressure sensor after completion of the predefined period of time (t_1) or on reaching a predefined fluid level (S_1) below the level (S_2).
10. A method according to one of the claims 2 to 9, with which the detection of the pressure of the surroundings is only effected if the fluid level remains below the level (S_2) of the pressure sensor for a predefined period of time (t_2).
11. A method according to claim 10, with which the pump is started again if a detection of the pressure of the surroundings is not effected.
12. A method according to one of the preceding claims, with which a method step for evaluating the pressure of the surroundings is started if the fluid level begins to sink at a predefined minimum speed.
13. A method according to one of the preceding claims, with which a detection of the pressure of the surrounding medium is carried out at predefined, preferably regular points in time.
14. A pump system with a level sensor which comprises a pressure sensor for determining an absolute pressure, and a control means which switches the pump on and/or off in dependence on the readings of the level sensor, wherein the pump comprises a calibration means which controls the pump such that for calibration a fluid level is lowered below the level of the pressure sensor so that this detects the pressure of the surroundings.
15. A pump system according to claim 14, with which the level sensor, the control means and the calibration means are an integral component of a pump unit.

16. A pump system according to claim 14 or 15, with which the pressure sensor is arranged above the suction port of the pump.
17. A pump system according to one of the claims 14 to 16, with which the pressure sensor is attached on the stator housing or pump housing.
18. A pump system according to one of the claims 14 to 17, with which a control means comprising the calibration means is arranged in a terminal box or in the pump housing or stator housing.
19. A pump system according to one of the claims 14 to 18, with which the pressure sensor is an absolute pressure sensor impinged on one side.
20. The use of a pressure sensor impinged on one side in a pump system according to one of the claims 14 to 19, wherein the pressure sensor only has electrical connection conduits.